

ABSTRACT

A cam cylinder (5) is provided with a first group cam (5a) and a second group cam (5b), respectively. A first group lens system (2) and a second group lens system (3) are engaged through a first group driving pin 8 and a second group driving pin 9 with the first and second group cams (5a and 5b), respectively. The first and second group lens systems (2 and 3) are biased by a spring (10) and are placed under a biased force acting in the opposite directions along an optical axis.

The first and second group cams (5a and 5b) have large cam angles in the vicinity of a starting position for collapsing in which a spring force is small, and the cam angles are reduced continuously in response to an increment of the spring force, and the cam angles become minimum in the vicinity of a collapsed position in which the spring force is maximum.